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United States Patent [19]
Ogami et al.

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[54] PORTABLE ELECTRONIC APPARATUS HAVING A REMOVABLE HARD DISK DRIVE INCLUDING AN EXTERNALLY OPERABLE LOCK MEMBER 5,315,478 5/1994 Cadwell et al. 361/684
5,402,309 3/1995 Ohgami et al. 361/685
5,432,673 7/1995 Ogami et al. 361/684

OTHER PUBLICATIONS

[75] Inventors: Keizo Ogami; Kohei Wada, both of Tokyo, Japan Japanese Utility Model Appln. Kokai Publication No. 63-39780, Mar. 1988.
[73] Assignee: Kabushiki Kaisha Toshiba, Kanagawa, Japan Japanese Utility Model Appln. Kokai Publication No. 63-195457, Dec., 1988.
[*] Notice: The term of the patent shall not extend beyond the expiration date of Pat. No. 5,264,986. Japanese Utility Model Appln. Kokai Publication No. 63-183673, Nov., 1988.
[21] Appl. No.: 320,981 Japanese Utility Model Appln. Kokai Publication No. 63-182078, Nov. 1988.
[22] Filed: Oct. 11, 1994 Japanese Patent Appln. Kokoku Publication No. 62-184687, Aug. 1987.
Japanese Patent Appln. Kokoku Publication No. 62-184686, Aug. 1987.
Japanese Patent Appln. Kokoku Publication No. 62-185293, Aug. 1987.
Japanese Patent Appln. Kokai Publication No. 58-66435, May. 1983.
NEC Ultralite Laptop Computer brochure, copyright 1988.

Related U.S. Application Data

[63] Continuation of Ser. No. 195,604, Feb. 14, 1994, abandoned, which is a continuation of Ser. No. 960,590, Oct. 13, 1992, abandoned.

[30] Foreign Application Priority Data

Oct. 14, 1991 [JP] Japan 3-264989

[51] Int. Cl.⁶ G06F 1/16; H05K 7/14
[52] U.S. Cl. 361/685; 361/726; 361/740
[58] Field of Search 364/708.1; 360/137; 312/223.2; 361/683-686, 725-727, 732, 740, 759, 801

[56] References Cited

U.S. PATENT DOCUMENTS

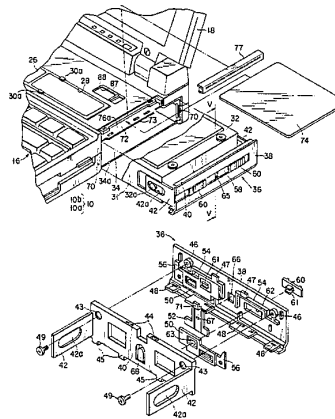
4,002,892 1/1977 Zielinski .
4,652,976 3/1987 Fushimoto .
4,695,925 9/1987 Kodai et al. .
4,773,783 9/1988 Dickie 400/682
4,807,955 2/1989 Ashman et al. .
4,903,222 2/1990 Carter et al. 364/708
4,926,365 5/1990 Hsieh 364/708
4,941,841 7/1990 Darden et al. 364/708 X
5,058,045 10/1991 Ma 364/708
5,234,351 8/1993 Dixon 439/160
5,264,986 11/1993 Ohgami et al. 361/685

Primary Examiner—Michael W. Phillips
Attorney, Agent, or Firm—Limbach & Limbach

[57] ABSTRACT

A portable electronic apparatus includes a housing having a storing section which has an insertion opening opened to the outside the housing. A HDD pack is stored in the storing section and detachable through the insertion opening. A HDD holder is connected to the HDD pack and detachably fitted in the insertion opening. A pair of sliders are provided on the HDD holder and movable between an engaged position where the sliders are engaged engagement holes formed in the housing to hold the HDD holder in the insertion opening and a retreated position where the sliders are disengaged from the engagement holes to allow the HDD holder to come into and out of the insertion opening. A lock member is provided on the HDD holder and movable between a locking position where the sliders are locked in the engaged position and a releasing position where the sliders are allowed to move.

24 Claims, 9 Drawing Sheets



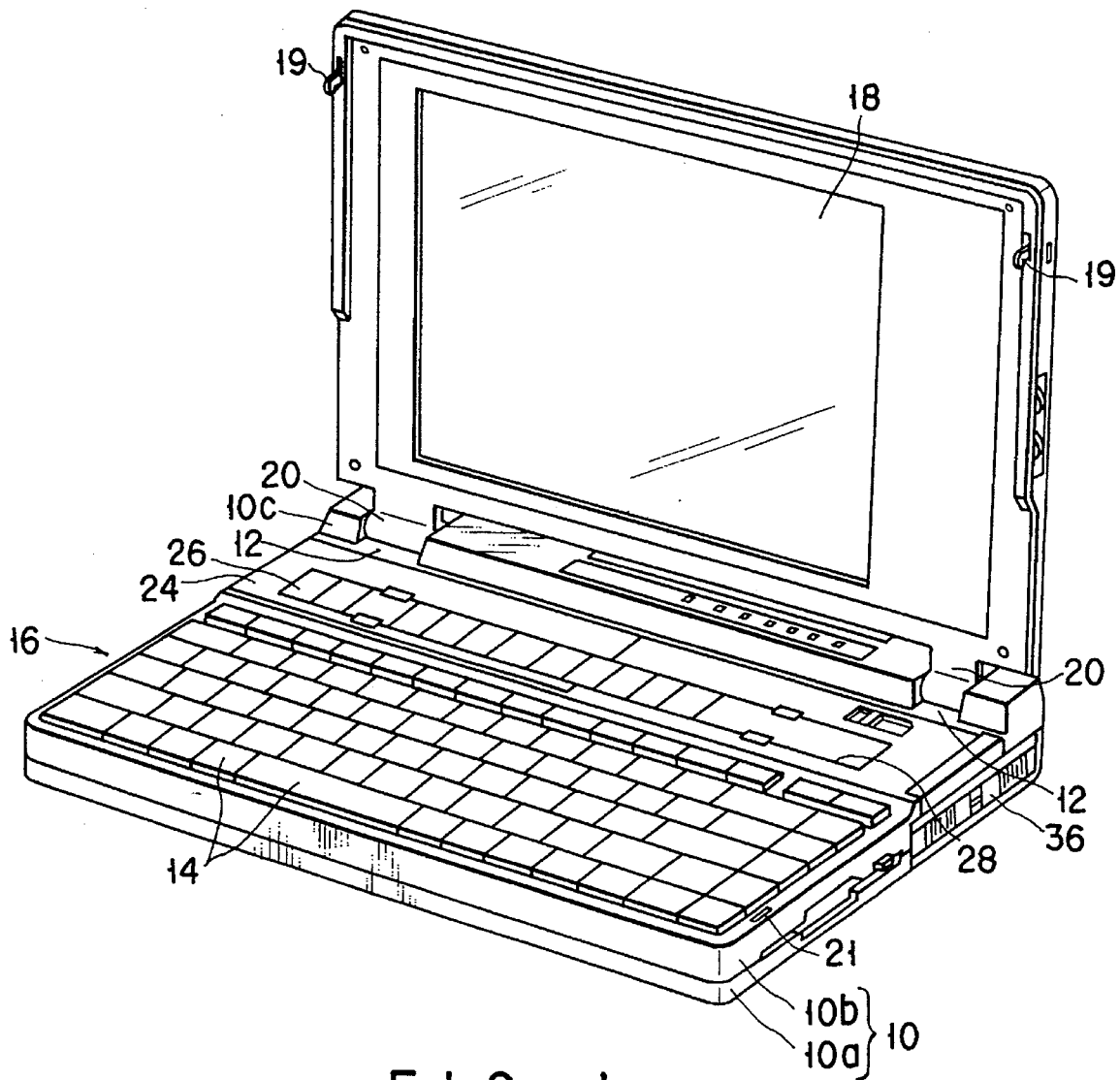


FIG. 1

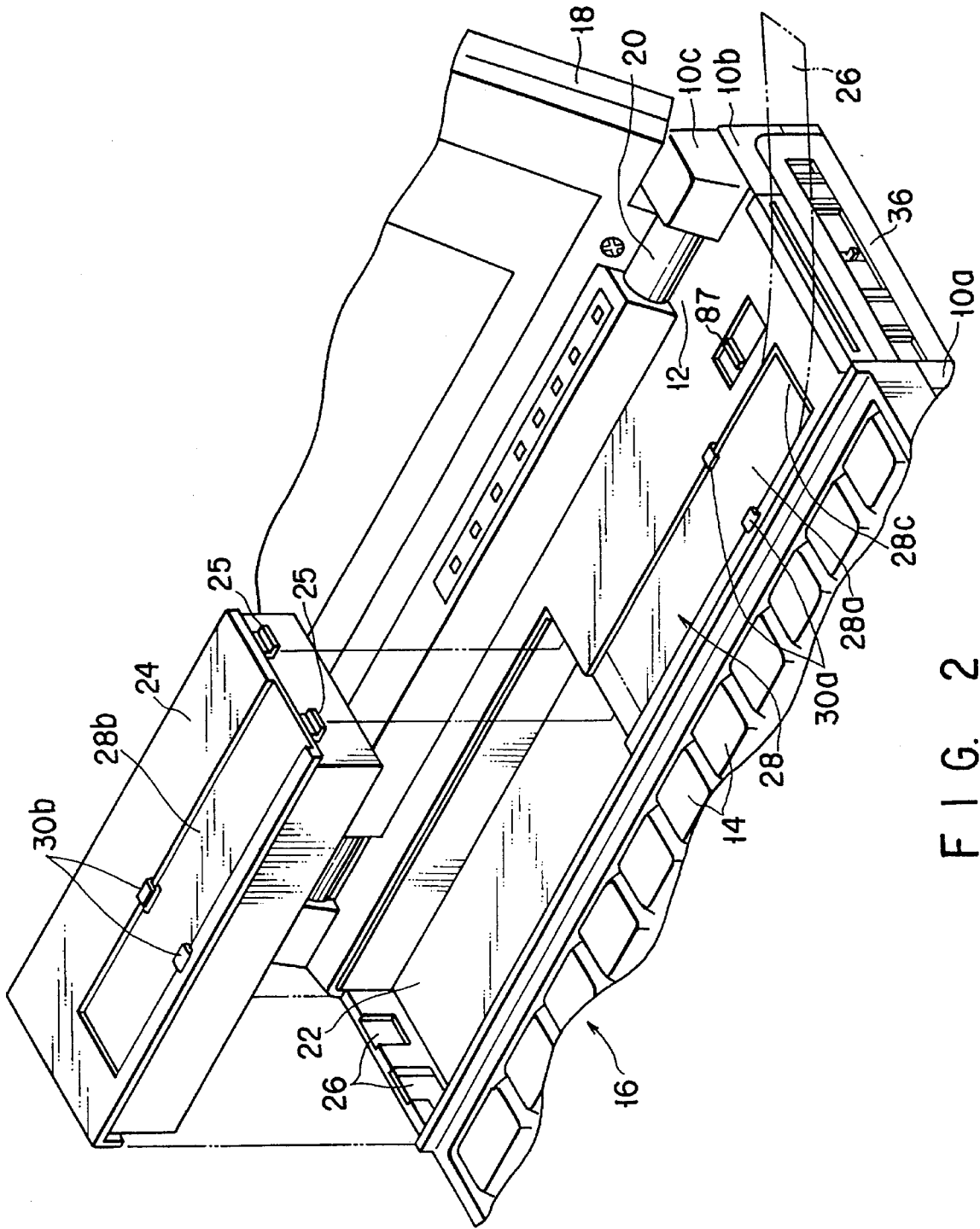


FIG. 2

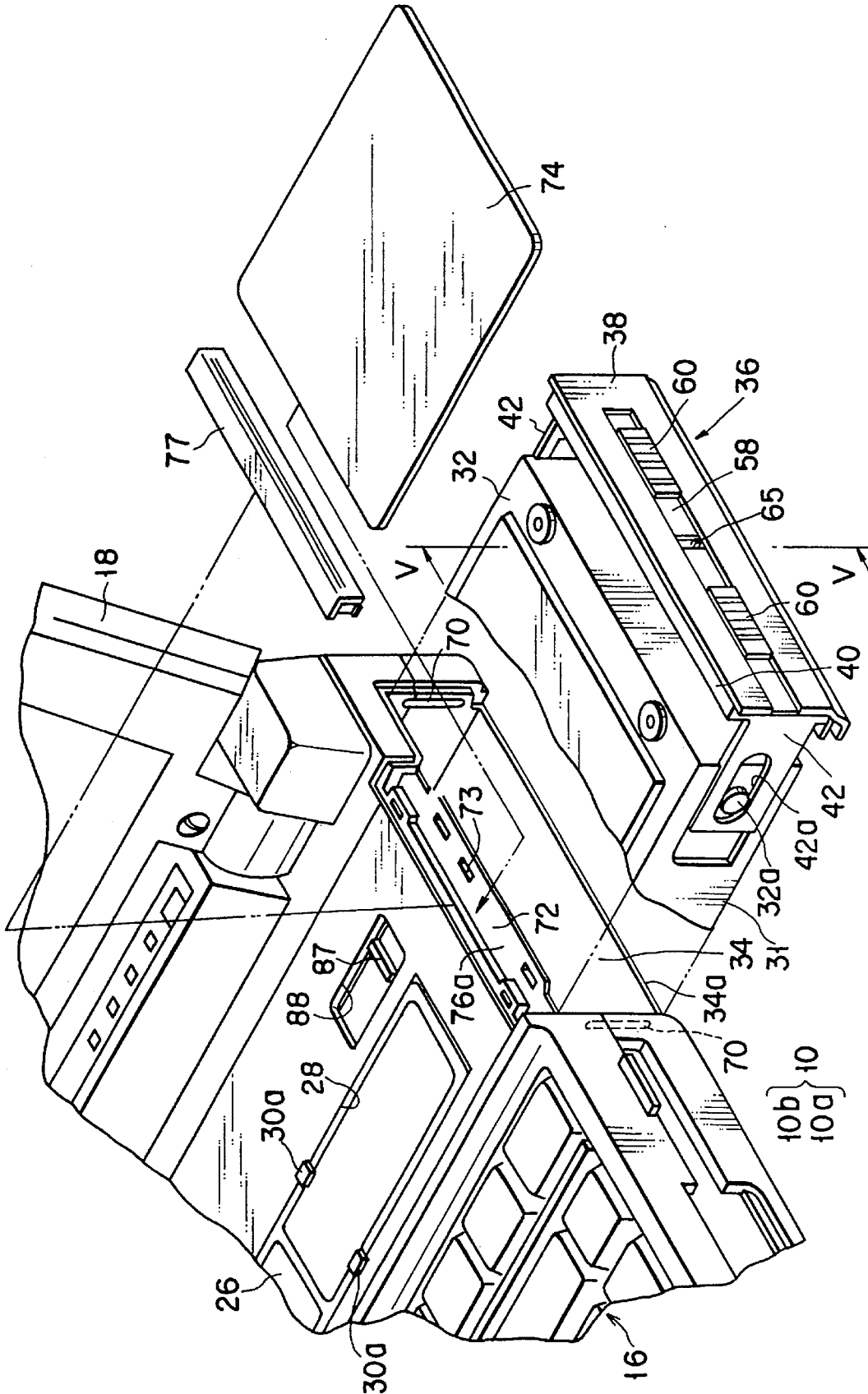


FIG. 3

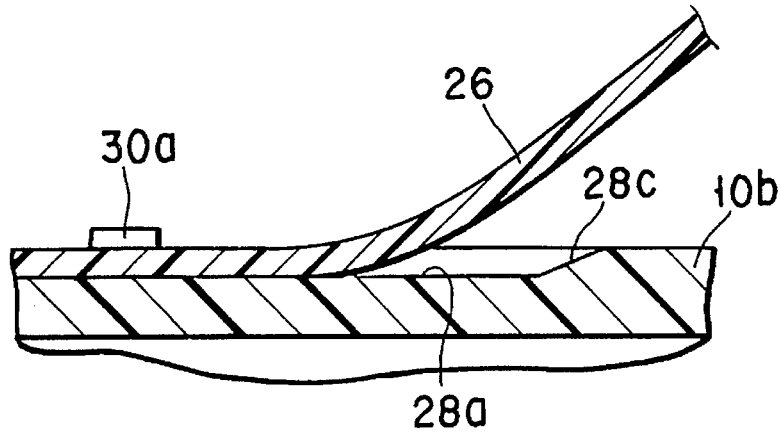


FIG. 4

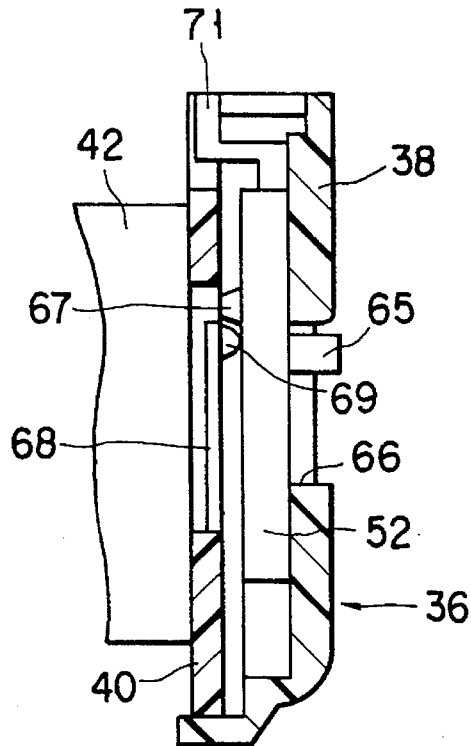


FIG. 5

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